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seemed to be to induct the student into some larger segment of the culture.

Another kind of answer emphasized a different objective. An appropriate label for this objective is hard to find, but developmental comes close. The chief characteristic of these answers is that they focus attention less on subject matter than on the development of the person. In this sense they are similar to the "liberal" objectives. They view the subject matter of the humanities and social sciences not as an end in itself, but as a means for developing in the student certain personal and intellectual qualities which are presumably not fostered to the same extent by the more technical parts of the curriculum.

A fourth kind of answer may be labeled contextual. All of these answers focused on the student in his role as an engineer. Most of them suggested an awareness of the engineer as an agent of social change, who must live his professional life within a human context. An important purpose of the humanities and social sciences, therefore, is to make him fully aware of this context, so that he may operate more effectively within it.

Recommendations

After this analysis of the problem, the ASEE Humanistic-Social Research Project Committee presents thirty-five specific recommendations. These recommendations and explanations are directed to have the humanities and social sciences not as a separate item, but as an integral part of a liberal engineering education. The programs should give students the opportunity to explore and choose. Advisors and perhaps even joint advising by engineering and liberal arts people should be provided. The course emphasis should be on involvement rather than on transfer of information whenever possible. This implies small sections and informal teaching methods. One of the more emphatic recommendations says that as a guideline 20% of the total Curriculum should be considered a minimum in these areas – exclusive of all strictly tool courses. and of incidental emphasis in engineering courses. Work in the humanities should constitute a continuing program through undergraduate and graduate years as well. Joint courses designed to relate engineering to the human context should be developed. Students should be encouraged to attempt more advanced courses on a pass-fail basis. Efforts should be made to break down the segregation of engineering students in special social, organizational, or geographic units.

Recommendations are made for better faculty organization and interdisciplinary communication. The report even goes so far as to say that a qualified humanist or social scientist should be invited to join each accrediting team and be asked to study and evaluate the humanistic-social part of the program. These recommendations provide an excellent base for evaluation of various curricula, but administrators are still faced with the gigantic task of implementation. ■

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